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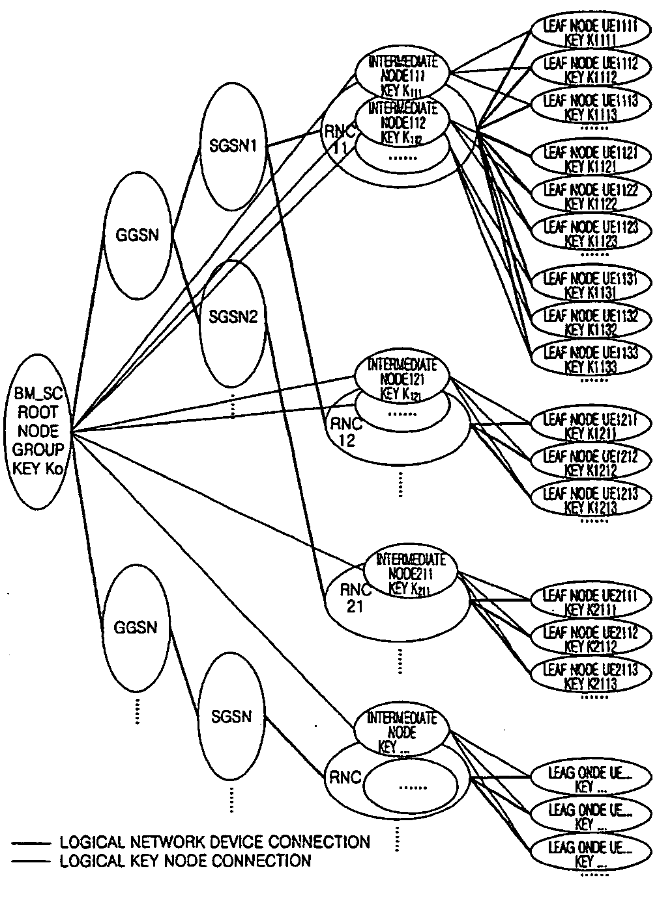
(54) Title: CIPHERING KEY MANAGEMENT AND DISTRIBUTION IN MBMS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RNC 11
LEAF NODE UE1121 KEY K1121
LEAF NODE UE1122 KEY K1122
GGSN
LEAF NODE UE1123 KEY K1123
LEAF NODE UE1131 KEY K1131
SGSN2
LEAF NODE UE1132 KEY K1132
LEAF NODE UE1133 KEY K1133
INTERMEDIATE NODE121 KEY K121
BM_SC ROOT NODE GROUP KEY Ko
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INTERMEDIATE NODE211 KEY K211
RNC 21
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GGSN
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INTERMEDIATE NODE KEY ...
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LEAG ONDE UE... KEY ...
LEAG ONDE UE... KEY ...
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LOGICAL NETWORK DEVICE CONNECTION
LOGICAL KEY NODE CONNECTION

(57) Abstract: A method for key management and assignment in MBMS service, the method includes following steps: the group key locates in the root node on the highest layer, which only has child nodes and doesn't have parent nodes; private keys corresponding to users locate in leaf nodes; the described intermediate node that owns both one parent node and one or more child nodes holds it own key. This invention deploys the method of combining point-to-point mode and point-to-multipoint mode during the process of key update; compared with the key update method only deploying point-to-point mode, this method can reduce the times necessary for information transmission, reduce the system load as well as the time needed for one key update process. Compared with the key update method only deploying point-to-multipoint mode, this solves the security problem of key exposure.